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10/661,706	09/12/2003	Thomas O. Holtey	16128BAUS01U	8232

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EXAMINER	
JOO, JOSHUA	

ART UNIT	PAPER NUMBER
2454	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/661,706	HOLTEY, THOMAS O.	
	Examiner	Art Unit	
	JOSHUA JOO	2454	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 October 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5,8,10 and 12-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2, 5, 8, 10, 12-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

This Office action is in response to Applicant's communication filed on 10/26/2009.

Claims 1-2, 5, 8, 10, 12-15 are pending for examination.

Response to Arguments

Applicant's arguments with respect to claims 1-2, 5, 8, 10, 12-15 have been considered but are moot in view of the new ground(s) of rejection. New ground(s) of rejection are necessitated by Applicant's amendment. Applicant also argued that:

(1) Wilford does not teach or suggest the feature of an array of ripeness indicators used to notify the statistic co-processor which of the accounts should be harvested.

In response, Examiner respectfully disagrees that Wilford does not teach or suggest the feature. Wilford teaches of a plurality of LCIs stored in a plurality of entries. The LCIs are stored in the entries when associated counters' threshold values are exceeded (col. 7, lines 36-40). The LCIs are read and stats relating to the read LCIs are collected (col. 7, lines 60-67).

(2) Examiner indicated that Donati taught the use of an array of ripeness indicators.

In response, Examiner will further clarify the rejection. As indicated in the Office action, Wilford teaches of ripeness indicators but does not specifically teach the indicators comprising an array of bits, each bit representing a counter. Donati is used to teach of a plurality of indicators including one or more bits, each bit representing at least one counter.

Claim Objections

Claims 1-2, 5, 8, 10, 12-15 are objected to because of the following informalities:

a) Regarding claims 1, 8, and 12, the term "theirs" should be replaced with what the term is actually referring to, e.g. "the subset of counters'".

b) Regarding claim 8, "its" should be replaced with what the term is actually referring to in order to clarify the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Regarding claim 1, "the counters" has insufficient antecedent basis.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 8, 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilford et al. US Patent #6,968,392 (Wilford hereinafter).

As per claim 1, Wilford teaches the invention as claimed including a method for selectively reading counter information in a network device, the method comprising the step of:

selectively setting ripeness indicators in an array of ripeness indicators, each of the ripeness indicators in the array including one or more bits and being associated with one or more of the counters and, when set, indicating that a value of at least one of the associated one or more counters has exceeded a threshold value, each of the counters containing information associated with statistics of traffic being handled by the network device (col. 7, lines 32-40; col. 8, lines 17-27. Store LCIs in a plurality of entries when associated adder(s) threshold is exceeded. col. 4, lines 9-20; col. 6, lines 1-10. Stat related to number of cells.);

reading the array of ripeness indicators to determine a subset of the counters that have fullness levels above their respective thresholds (col. 7, line 60-67; col. 8, lines 1-5. Read LCIs in entries.); and

after reading the array of ripeness indicators, reading only the subset of counters determined from reading the array of ripeness indicators (col. 7, line 60-67; col. 8, lines 1-5. Collect stats that relate to LCI.).

As per claim 8, Wilford teaches the invention as claimed including a network device comprising:

a forwarding engine configured to process data traffic received by the network device (col. 2, lines 64-68. Network device such as a switch or router. col. 3, line 38-51; col. 4, lines 30-46. Module for processing traffic.);

a plurality of counters configured to monitor aspects of data traffic received by the network device (col. 4 lines 30-34. Plurality of adders for counting stats.);

an array of ripeness indicators, each of the ripeness indicators in the array including one or more bits and being associated with one or more of the counters, each of the ripeness indicators being indicative of a fullness level of the one or more counters with which the ripeness indicator is associated and indicating that the fullness level of the one or more counters has exceeded its threshold (col. 7, lines 32-40; col. 8, lines 17-27. Store LCIs in a plurality of entries when threshold is reached or exceeded.); and

control logic configured to read the array of ripeness indicators to determine a subset of the counters that have fullness levels above their respective thresholds, the control logic being further configured to harvest information only from counters in the subset of counters determined from reading the array of ripeness indicators (col. 7, line 60-67; col. 8, lines 1-5. Collect stats that related to LCI(s).).

As per claim 12, Wilford teaches the invention as claimed including a network device comprising:

a forwarding engine configured to process data traffic received by the network device (col. 2, lines 64-68. Network device such as a switch or router. col. 3, line 38-51; col. 4, lines 30-46. Module for processing traffic.);

a plurality of counters configured to monitor aspects of data traffic received by the network device (col. 4 lines 30-34. Plurality of adders for counting stats.);

an array of bits implementing a plurality of ripeness indicators, each of the ripeness of the indicators being associated with one or more of the counters, each of the ripeness indicators being indicative of a fullness level of the one or more counters with which it is associated and indicating that the fullness level of the one or more counters has exceeded a threshold (col. 7, lines 32-40; col. 8, lines 17-27. Store LCIs in a plurality of entries when threshold is reached or exceeded.); and

control logic configured to read the array of ripeness indicators to determine a subset of the counters that have fullness levels above their respective thresholds, the control logic being further configured to read, after reading the array of ripeness indicators, only the subset of counters that were determined to have fullness above their respective thresholds (col. 7, line 60-67; col. 8, lines 1-5. Collect stats that related to LCI(s).);

wherein the forwarding engine maintains the counters (col. 4, lines 28-40. Stat architecture includes adders.).

As per claim 13, Wilford teaches the network device of claim 8 wherein the control logic is part of the forwarding engine (col. 8, lines 1-5. Collect statistical information by reading stats.).

As per claim 14, Wilford teaches the network device of claim 8, further comprising a switch fabric connected to the forwarding engine (col. 3, lines 1-11. Switch.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilford, in view of Donati et al. US Patent No. 7,007,099 (Donati hereinafter).

As per claim 2, Wilford does not specifically teach the method of claim 1, further comprising resetting the ripeness indicators after reading the associated counters.

Donati teaches of resetting indicators to a default value (col. 46, line 64-col. 47, line 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to reset an indicators. The motivation for the suggested combination is that Donati's teachings would enable repeat of the counting process from default values.

As per claim 10, Wilford does not specifically teach the network device of claim 8, wherein every bit in the array of ripeness indicators represents at least one of said counters.

Donati teaches of indicators comprising an array of bits, wherein every bit represents at least one counter (col. 63, lines 54-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings for every bit in the array to represent at least one of said counters. The motivation for the suggested combination is that Donati's teachings of using bits as representative objects would reduce memory usage since a bit represents the smallest unit of data.

Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilford, in view of Dugatkin et al. US Publication #2004/0236866 (Dugatkin hereinafter).

As per claim 5, Wilford does not specifically teach the method of claim 1, further comprising dynamically adjusting the thresholds.

Dugatkin teaches of dynamically adjusting thresholds (Paragraphs 0050; 0059).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to dynamically adjust thresholds. The motivation for the suggested combination is that Dugatkin's teachings would improve Wildford's teachings by enabling collection of data according to user-defined operational parameters and enabling automatic analysis and statistics gathering of network traffic (Paragraphs 0025, 0050).

As per claim 15, Wilford does not specifically teach the network device of claim 8 further comprising a statistics coprocessor configured to interface with said counters and said control logic to enable meaningful statistics to be generated from values harvested from said counters.

Dugatkin teaches of a statistics coprocessor configured to interface with counters and a control logic to enable statistics to be generated from values harvested from said counters (Paragraph 0067; 0072-0073).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings to implement a statistics coprocessor configured to interface with said counters and said control logic to enable statistics to be generated from values harvested from said counters. The motivation for the suggested combination is that Dugatkin's teachings would improve Wilford's teachings by providing automatic traffic analysis and enabling generation of user readable reports.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7 to 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/J. J./
Examiner, Art Unit 2454

/NATHAN FLYNN/

Supervisory Patent Examiner, Art Unit 2454